means to communicate received said identity data streams to said at least one said

individual remote receiver unit.

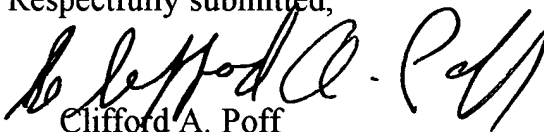Please cancel claims 1-48.

REMARKS

This application is filed as a continuation application pursuant to 37

CFR§1.53(d). The prior non-divisional application Serial No. 08/421,810 is complete as

defined by §1.51(d). The inventors are the same as presently named in the prior

application and it is requested to utilize for this new application the file jacket of the prior

application including the specification, drawings, declaration from the prior application to

constitute application. Pursuant to 37 CFR 1.52(2)(v) the prior application Serial No.

08/421,810 is expressly abandon as of the filing date for the presently submitted

application. The basic filing fee and additional filing fee based on claims remaining by

entry of this amendment are submitted by check as outlined in the Request Transmittal.

Newly submitted claims 49-71 correspond to claims 49-71 in parent

application Serial No. 08/420,810. Newly submitted claims 72-101 have been copied

from the claims in United States Patent No. 5,627,524 issued May 6, 1997 for the

purpose of provoking an interference with this patent. A copy of United States Patent

No. 5,627,524 is enclosed. The newly submitted claims correspond, expect for

dependency numbering, to all the claims 1-30 in Patent 5,627,524. Attached hereto is

"Exhibit "A" - Claim Chart consisting of pages 1-20 setting forth a comparison of claims

1-30 from United States Patent No. 5,627,524 with a disclosure by the specification of

Conrad, et al application submitted concurrently herewith.

The party Conrad, et al, first introduced all the claims from Patent No

5,627,524 into the Conrad, et al, co-pending application Serial No. 08/421,810 by an

amendment dated May 4, 1998 with mail certification date of May 5, 1998. The Conrad,

et al, application Serial No. 08/421,810 is before the Board of Patent Appeals and

Interferences in an Ex parte Appeal, No. 97-3101. In a decision dated February 19, 1999

in response to a Petition under 37 CFR 1.181(a)(3) entry of claims in application Serial

No. 08/421,810 for the purpose of interference was again refused. The Decision on

Petition suggested filing an application under 37 CFR 1.53 which action is represented by

this filing.

Respectfully submitted,

Clifford A. Poff
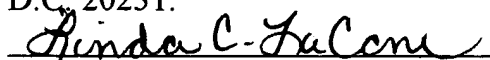Agent for Applicant
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Claims of U.S. Patent No. 5,627,524	Conrad, et al., Serial No. 08/421,810
1.(Conrad Claim 72) A locator system comprising	"Referring first now to the block diagram of Figure 1, there is illustrated one form of intelligent locator system according to the present invention--" (page 6, lines 9-11)
a number of individual portable transmitter units,	"A plurality of intelligent locator transmitter badges 18_1, 18_2, 18_3, 18_4- - -18_n," (page 10, lines 18-19)
a number of individual stationary receiver units, and	"Each arbitrator 6_1, 6_2- - -6_{32} communicates by a serial data bus 8_1, 8_2- - -8_{32}, with up to 32 intelligent locator receivers 16_1, 16_2- - -16_{32}," (page 10, lines 6-8)
central data processing means;	"The intelligent locator system of Figure 1 includes a central control computer such as a Personal Computer having a 386 central processor identified for the purpose of disclosure of the present invention as an intelligent locator computer 2 because of interfacing with allied components of the system." (page 9, lines 18-22)
said transmitter units each comprising infrared transmission means and	"Infrared light emitting diodes 84A and 84B are energized when transistor is turned ON." (page 18, line 26 to page 19, line 1)
programmable microprocessor means such that a unique identity data stream	The transmitter 18 includes a microcontroller 70 comprised of an IC package containing a programmable

is transmitted by each transmitter unit;

said receiver units each comprising in combination infrared receiving means and

programmable microprocessor means remotely separated from said central data processing means such that each said receiver unit has the capability to store multiple said unique identity data streams received from multiple said transmitter units and can communicate said identity data streams to said central data processing means.

memory for an operating program whose function is to define an unique 20 bit identification code for identifying the transmitter uniquely among all other transmitters and other sources of possible infrared pulse emissions occurring within the receiving range of the receivers 16."(page 18, lines 8-14)

"Preamp board 106 includes Pin photodiode 118 for detecting by impingement infrared pulses 104 emitted by an intelligent locator transmitter 18."(page 20, lines 12-14)

"For this purpose, the microcontroller 158 includes an operating program to perform an important and believed novel feature of the present invention of causing operation of the microcontroller to recalculate a checksum by using bursts from the received identification code and then comparing the freshly calculated checksum equals the checksum received with the identification code, the code is established as valid"(page 23, lines 1-9)--"When the operation of microcontroller 158 establishes the validity of a received identification code then the microcontroller outputs a signal corresponding to the validated code to the intelligent locator arbitrator 6_1, 6_2- - -6_{32} by way of the RS-485 serial data bus 8.--In the system shown in Figure 2, the

arbitrators 6_1, 6_2- - -6_{32} return the nurse level information corresponding to that received identification code to the microcontroller 158 of the receiver."(page 23, lines 15-23) "Each arbitrator 6 operates to establish the event when a transmitter 18 is first detected by a receiver 16 and the event when a transmitter 18 is no longer detected by a receiver 16 and transmits such start and stop events as signals to the intelligent locator computer 2."(page 27, lines 11-15) "The microcontroller 222 also stores that identification code in a static ram 190 and 194 in a table of information for that particular receiver 16."(page 27, lines 23-25) "The arbitrators transmits signals corresponding to these start and stop events to the computer 2."(page 11, lines 15-16) "The operating software of the intelligent locator computer operates to read into the computer memory the start and stop events from the intelligent locator arbitrator's 6, time stamps the events, and stores the data of the event in a relational database."(page 11, lines 21-25)

2. (Conrad Claim 73) The system of claim 1, where each said unique identity data stream comprises a stream of digitally pulsed infrared radiation

"In Figure 4 a 20 millisecond time interval is depicted during which 14 infrared pulses, each identified by reference numeral 42, occur with an approximate 10 microsecond duration which is identified by reference numeral 44."(page 16, lines 3-8)

consisting of 16 data bits framed by a pair of start bits and a stop bit.

"The 20 millisecond burst transmission is made up of 3 components. The first is a start bit interval 46 during which an initial pulse 42 occurs to synchronize the receiver 16 for reading the transmission. The second component of the pulse transmission are 10 pulses occurring during an interval 48 representing a 20 bit code. A third component of the pulse transmission, which also comprises an important novel feature of the present invention, are three pulses 42 representing a 6 bit checksum occurring during an interval 50 and detected and used by a receiver 126 to insure integrity of the received data."(page 16, lines 7-17)

3. (Conrad claim 74) The system of claim 1, where each said transmitter unit transmits said identity data stream in a unique non-standard periodic pattern, such that no two said transmitter units transmit with identical periodic patterns.

"It is an important and novel feature of the present invention that a pulse burst of 20 milliseconds duration defines a unique binary identification code that is transmitted approximately once a second with its position in time relative to the start of each second determined by an algorithm."(page 14, lines 10-15)

4. (Conrad Claim 75) The system of claim 1, where said transmitter units transmit both vertically and horizontally.

"Diodes 84A and 84B..."(page 19, line 1)

5. (Conrad Claim 76) The system of claim 1, where said

"All the intelligent locator receivers associated with the various intelligent

transmitter unit microprocessor means is programmed to one of 65,535 possible said unique identity data streams.

6. (Conrad Claim 77) The system of claim 1, where said receiver unit microprocessor means test each received said identity data stream for validity.

7. (Conrad Claim 78) The system of claim 1, further comprising a number of slave receiver units connected to individual said receiver units, said slave units comprising infrared receiving means and means to communicate received said identity data streams from said transmitter units to said receiver units, said slave receiver unit having no individual microprocessor means.

locator arbitrators are responsive to anyone of at least one but preferably a plurality of intelligent locator transmitter badges 18_1, 18_2, 18_3, 18_4- - -18_n, each of which, as will be described in greater detail hereinafter, transmits an unique bit code when chosen with bits 20 to enable up to 1,048,576 badges uniquely recognizable by the system."
(Page 10, lines 16-22)

"The microcontroller 158 samples the input bursts to establish the validity of an identification code. The validation is made when the identification code consists of, as shown in Figure 4, a start pulse 46 followed by 10 pulses 48 representing a 20 bit code, followed by three pulses 50 representing a 6 bit checksum."(page 22, lines 20-25)

"Turning first to Figure 7, there is illustrated by the block diagram two circuit boards, one of which is a preamp board 106, and the other a logic board 108 which are mounted to a single gang face plate for installation in a wall or in a ceiling of a room within the premises of a facility where the system of the present invention operates. Preamp board 106 is mounted directly to the face plate and logic board 108 forms the back board mounted behind the preamp board in a piggy-back fashion. Preamp board

106 includes Pin photodiode 118 for detecting by impingement infrared pulses 104 emitted by an intelligent locator transmitter 18."(page 20, lines 4-14)

8. (Conrad Claim 79) The system of claim 1, where each said transmitter unit repeatedly transmit said identity data stream in a unique non-standard periodic pattern consisting of three transmissions with different time intervals between each of said three transmission in said pattern, and where no two said transmitter units have identical time intervals between said three transmissions.

"To facilitate an understanding of the underlying principle of the present invention, reference is now made to the diagram of Figure 3 wherein there is illustrated timing diagrams in graphical form of three simultaneous infrared transmissions by three separate intelligent locator transmitters over a four second period. It is an important and novel feature of the present invention that a pulse burst of 20 milliseconds duration defines a unique binary identification code that is transmitted approximately once a second with its position in time relative to the start of each second determined by an algorithm."(page 14, lines 5-15)

9. (Conrad Claim 80) The system of claim 1, where each said transmitter unit repeatedly transmits said identity data stream once during successive predetermined time periods, with the time interval between each two successive transmissions differing from the time interval between the previous two successive transmissions.

"To facilitate an understanding of the underlying principle of the present invention, reference is now made to the diagram of Figure 3 wherein there is illustrated timing diagrams in graphical form of three simultaneous infrared transmissions by three separate intelligent locator transmitters over a four second period. It is an important and novel feature of the present invention that a pulse burst of 20 milliseconds duration defines a

unique binary identification code that is transmitted approximately once a second with its position in time relative to the start of each second determined by an algorithm."(page 14, lines 5-15)

10. (Conrad Claim 81) The system of claim 1, where at least one said individual remote receiver unit is in communication with one or more slave receiver units, said slave receiver units having no individual microprocessor means and comprising infrared receiving means to receive said identity data streams from said transmitter units and means to communicate received said identity data streams to said at least one said individual remote receiver unit.

"Turning first to Figure 7, there is illustrated by the block diagram two circuit boards, one of which is a preamp board 106, and the other a logic board 108 which are mounted to a single gang face plate for installation in a wall or in a ceiling of a room within the premises of a facility where the system of the present invention operates. Preamp board 106 is mounted directly to the face plate and logic board 108 forms the back board mounted behind the preamp board in a piggy-back fashion. Preamp board 106 includes Pin photodiode 118 for detecting by impingement infrared pulses 104 emitted by an intelligent locator transmitter 18."(page 20, lines 4-14)

11. (Conrad Claim 82) A locator system comprising

"Referring first now to the block diagram of Figure 1, there is illustrated one form of intelligent locator system according to the present invention--" (page 6, lines 9-11)

a number of individual portable transmitter units,

"A plurality of intelligent locator transmitter badges 18_1, 18_2, 18_3, 18_4- - -18_n" (page 10, lines 18-19)

a number of stationary individual remote receiver units, and	"Each arbitrator 6_1, 6_2- - -6_{32} communicates by a serial data bus 8_1, 8_2- - -8_{32}, with up to 32 intelligent locator receivers 16_1, 16_2- - -16_{32}," (page 10, lines 6-8)
a central data processing means;	"The intelligent locator system of Figure 1 includes a central control computer such as a Personal Computer having a 386 central processor identified for the purpose of disclosure of the present invention as an intelligent locator computer 2 because of interfacing with allied components of the system." (page 9, lines 18-22)
said transmitter units each comprising infrared transmission means and programmable microprocessor means such that a unique identity data stream is transmitted by each transmitter unit;	"Infrared light emitting diodes 84A and 84B are energized when transistor is turned ON." (page 18, line 26 to page 19, line 1)
said individual remote receiver units each comprising a single infrared receiving means and a single programmable microprocessor means, such that the total number of said programmable microprocessor means is equal to the total number of said individual remote receiver units in said locator system, such that each said individual remote receiver unit has the capability to store multiple said unique identity data streams received from multiple said transmitter units and can communicate said identity data streams to said central data processing	The transmitter 18 includes a microcontroller 70 comprised of an IC package containing a programmable memory for an operating program whose function is to define an unique 20 bit identification code for identifying the transmitter uniquely among all other transmitters and other sources of possible infrared pulse emissions occurring within the receiving range of the receivers 16."(page 18, lines 8-14) "Preamp board 106 includes Pin photodiode 118 for detecting by impingement infrared pulses 104 emitted by an

means.

intelligent locator transmitter 18."
(page 20, lines 12-14) "For this
purpose, the microcontroller 158
includes an operating program to
perform an important and believed
novel feature of the present invention
of causing operation of the
microcontroller to recalculate a
checksum by using bursts from the
received identification code and then
comparing the freshly calculated
checksum equals the checksum
received with the identification code,
the code is established as valid"(page
23, lines 1-9)--"When the operation of
microcontroller 158 establishes the
validity of a received identification
code then the microcontroller outputs
a signal corresponding to the validated
code to the intelligent locator
arbitrator 6_1, 6_2- - -6_{32} by way of the
RS-485 serial data bus 8.--In the
system shown in Figure 2, the
arbitrators 6_1, 6_2- - -6_{32} return the
nurse level information corresponding
to that received identification code to
the microcontroller 158 of the
receiver."(page 23, lines 15-23) "Each
arbitrator 6 operates to establish the
event when a transmitter 18 is first
detected by a receiver 16 and the
event when a transmitter 18 is no
longer detected by a receiver 16 and
transmits such start and stop events as
signals to the intelligent locator
computer 2."(page 27, lines 11-15)
"The microcontroller 222 also stores

that identification code in a static ram 190 and 194 in a table of information for that particular receiver 16."(page 27, lines 23-25) "The arbitrators transmits signals corresponding to these start and stop events to the computer 2."(page 11, lines 15-16) "The operating software of the intelligent locator computer operates to read into the computer memory the start and stop events from the intelligent locator arbitrator's 6, time stamps the events, and stores the data of the event in a relational database."(page 11, lines 21-25)

12. (Conrad Claim 83) The system of claim 11, where said unique identity data stream comprises a stream of digitally pulsed infrared radiation

"In Figure 4 a 20 millisecond time interval is depicted during which 14 infrared pulses, each identified by reference numeral 42, occur with an approximate 10 microsecond duration which is identified by reference numeral 44."(page 16, lines 3-8)

consisting of 16 data bits framed by a pair of start bits and a stop bit.

"The 20 millisecond burst transmission is made up of 3 components. The first is a start bit interval 46 during which an initial pulse 42 occurs to synchronize the receiver 16 for reading the transmission. The second component of the pulse transmission are 10 pulses occurring during an interval 48 representing a 20 bit code. A third component of the pulse transmission, which also comprises an important novel feature of the present invention,

are three pulses 42 representing a 6 bit checksum occurring during an interval 50 and detected and used by a receiver 126 to insure integrity of the received data."(page 16, lines 7-17)

13. (Conrad Claim 84) The system of claim 11, where each said transmitter unit transmits said identity data stream in a unique non-standard periodic pattern, such that no two said transmitter units transmit with identical periodic patterns.

"It is an important and novel feature of the present invention that a pulse burst of 20 milliseconds duration defines a unique binary identification code that is transmitted approximately once a second with its position in time relative to the start of each second determined by an algorithm."(page 14, lines 10-15)

14. (Conrad Claim 85) The system of claim 11, where said transmitter units transmit both vertically and horizontally.

"Diodes 84A and 84B..."(page 19, line 1)

15. (Conrad Claim 86) The system of claim 11, where said transmitter unit microprocessor means is programmed to one of 65,535 possible said unique identity data streams.

"All the intelligent locator receivers associated with the various intelligent locator arbitrators are responsive to anyone of at least one but preferably a plurality of intelligent locator transmitter badges 18_1, 18_2, 18_3, 18_4- - -18_n, each of which, as will be described in greater detail hereinafter, transmits an unique bit code when chosen with bits 20 to enable up to 1,048,576 badges uniquely recognizable by the system."
(Page 10, lines 16-22)

16. (Conrad Claim 87) The system of claim 11, where said

"The microcontroller 158 samples the input bursts to establish the validity of

receiver unit microprocessor means test each received said identity data stream for validity.

17. (Conrad Claim 88) The system of claim 11, further comprising a number of slave receiver units connected to individual said receiver units, said salve units comprising infrared receiving means and means to communicate received said identity data streams from said transmitter units to said receiver units, said slave receiver units having no individual microprocessor means.

18. (Conrad Claim 89) The system of claim 11, where each said transmitter unit repeatedly transmits said identity data stream in a unique non-standard periodic pattern consisting of three transmissions with different time intervals between each of said three transmissions in said

an identification code. The validation is made when the identification code consists of, as shown in Figure 4, a start pulse 46 followed by 10 pulses 48 representing a 20 bit code, followed by three pulses 50 representing a 6 bit checksum."(page 22, lines 20-25)

"Turning first to Figure 7, there is illustrated by the block diagram two circuit boards, one of which is a preamp board 106, and the other a logic board 108 which are mounted to a single gang face plate for installation in a wall or in a ceiling of a room within the premises of a facility where the system of the present invention operates. Preamp board 106 is mounted directly to the face plate and logic board 108 forms the back board mounted behind the preamp board in a piggy-back fashion. Preamp board 106 includes Pin photodiode 118 for detecting by impingement infrared pulses 104 emitted by an intelligent locator transmitter 18."(page 20, lines 4-14)

"To facilitate an understanding of the underlying principle of the present invention, reference is now made to the diagram of Figure 3 wherein there is illustrated timing diagrams in graphical form of three simultaneous infrared transmissions by three separate intelligent locator transmitters

pattern, and where no two said transmitter units have identical time intervals between said three transmissions.

over a four second period. It is an important and novel feature of the present invention that a pulse burst of 20 milliseconds duration defines a unique binary identification code that is transmitted approximately once a second with its position in time relative to the start of each second determined by an algorithm."(page 14, lines 5-15)

19. (Conrad Claim 90) The system of claim 11, where each said transmitter unit repeatedly transmits said identity data stream once during successive predetermined time periods, with the time interval between each two successive transmissions differing from the time interval between the previous two successive transmissions.

"To facilitate an understanding of the underlying principle of the present invention, reference is now made to the diagram of Figure 3 wherein there is illustrated timing diagrams in graphical form of three simultaneous infrared transmissions by three separate intelligent locator transmitters over a four second period. It is an important and novel feature of the present invention that a pulse burst of 20 milliseconds duration defines a unique binary identification code that is transmitted approximately once a second with its position in time relative to the start of each second determined by an algorithm."(page 14, lines 5-15)

20. (Conrad Claim 91) The system of claim 11, where at least one said individual remote receiver unit is in communication with one or more slave receiver units, said slave receiver units having no individual microprocessor means and comprising

"Turning first to Figure 7, there is illustrated by the block diagram two circuit boards, one of which is a preamp board 106, and the other a logic board 108 which are mounted to a single gang face plate for installation in a wall or in a ceiling of a room

infrared receiving means to receive said identity data streams from said transmitter units and means to communicate received said identity data streams to said at least one said individual remote receiver unit.

/

within the premises of a facility where the system of the present invention operates. Preamp board 106 is mounted directly to the face plate and logic board 108 forms the back board mounted behind the preamp board in a piggy-back fashion. Preamp board 106 includes Pin photodiode 118 for detecting by impingement infrared pulses 104 emitted by an intelligent locator transmitter 18."(page 20, lines 4-14)

21. (Conrad Claim 92) A locator system comprising

"Referring first now to the block diagram of Figure 1, there is illustrated one form of intelligent locator system according to the present invention--" (page 6, lines 9-11)

a number of individual portable transmitter units,

"A plurality of intelligent locator transmitter badges 18_1, 18_2, 18_3, 18_4- - -18_n" (page 10, lines 18-19)

a number of stationary individual remote receiver units, and

"Each arbitrator 6_1, 6_2- - -6_{32} communicates by a serial data bus 8_1, 8_2- - -$8_{32,}$ with up to 32 intelligent locator receivers 16_1, 16_2- - -$16_{32,}$" (page 10, lines 6-8)

a central data processing means;

"The intelligent locator system of Figure 1 includes a central control computer such as a Personal Computer having a 386 central processor identified for the purpose of disclosure of the present invention as an intelligent locator computer 2 because of interfacing with allied components

said transmitter units each comprising infrared transmission means and programmable microprocessor means such that a unique identity data stream is transmitted by each transmitter unit;

"Preamp board 106 includes Pin photodiode 118 for detecting by impingement infrared pulses 104 emitted by an intelligent locator transmitter 18."(page 20, lines 12-14)

said individual remote receiver units each comprising a paired single infrared receiving means and single programmable microprocessor means, said single programmable microprocessor means being in communication with only one said individual remote receiver unit, such that each said individual remote receiver unit has the capability to store multiple said unique identity data streams received from multiple said transmitter units and can communicate said identity data streams to said central data processing means.

"For this purpose, the microcontroller 158 includes an operating program to perform an important and believed novel feature of the present invention of causing operation of the microcontroller to recalculate a checksum by using bursts from the received identification code and then comparing the freshly calculated checksum equals the checksum received with the identification code, the code is established as valid"(page 23, lines 1-9)--"When the operation of microcontroller 158 establishes the validity of a received identification code then the microcontroller outputs a signal corresponding to the validated code to the intelligent locator arbitrator 6_1, 6_2- - -6_{32} by way of the RS-485 serial data bus 8.--In the system shown in Figure 2, the arbitrators 6_1, 6_2- - -6_{32} return the nurse level information corresponding to that received identification code to the microcontroller 158 of the receiver."(page 23, lines 15-23) "Each arbitrator 6 operates to establish the event when a transmitter 18 is first

detected by a receiver 16 and the event when a transmitter 18 is no longer detected by a receiver 16 and transmits such start and stop events as signals to the intelligent locator computer 2."(page 27, lines 11-15) "The microcontroller 222 also stores that identification code in a static ram 190 and 194 in a table of information for that particular receiver 16."(page 27, lines 23-25) "The arbitrators transmits signals corresponding to these start and stop events to the computer 2."(page 11, lines 15-16) "The operating software of the intelligent locator computer operates to read into the computer memory the start and stop events from the intelligent locator arbitrator's 6, time stamps the events, and stores the data of the event in a relational database."(page 11, lines 21-25)

22. (Conrad Claim 93) The system of claim 21, where said unique identity data stream comprises a stream of digitally pulsed infrared radiation consisting of 16 data bits framed by a pair of start bits and a stop bit.

"In Figure 4 a 20 millisecond time interval is depicted during which 14 infrared pulses, each identified by reference numeral 42, occur with an approximate 10 microsecond duration which is identified by reference numeral 44."(page 16, lines 3-8)

23.(Conrad Claim 94) The system of claim 21, where each said transmitter unit transmits said identity data stream in a unique non-standard periodic pattern, such that no two said transmitter units transmit with identical

"It is an important and novel feature of the present invention that a pulse burst of 20 milliseconds duration defines a unique binary identification code that is transmitted approximately once a second with its position in time

periodic patterns.

relative to the start of each second determined by an algorithm."(page 14, lines 10-15)

24. (Conrad Claim 95) The system of claim 21, where said transmitter units transmit both vertically and horizontally.

"Diodes 84A and 84B..."(page 19, line 1)

25. (Conrad Claim 96) The system of claim 21, where said transmitter unit microprocessor means is programmed to one of 65,535 possible said unique identity data streams.

"All the intelligent locator receivers associated with the various intelligent locator arbitrators are responsive to anyone of at least one but preferably a plurality of intelligent locator transmitter badges 18_1, 18_2, 18_3, 18_4- - -18_n, each of which, as will be described in greater detail hereinafter, transmits an unique bit code when chosen with bits 20 to enable up to 1,048,576 badges uniquely recognizable by the system."
(Page 10, lines 16-22)

26. (Conrad Claim 97) The system of claim 21, where said receiver unit microprocessor means test each received said identity data stream for validity.

"The microcontroller 158 samples the input bursts to establish the validity of an identification code. The validation is made when the identification code consists of, as shown in Figure 4, a start pulse 46 followed by 10 pulses 48 representing a 20 bit code, followed by three pulses 50 representing a 6 bit checksum."(page 22, lines 20-25)

27. (Conrad Claim 98) The system of claim 21, further comprising

"Turning first to Figure 7, there is illustrated by the block diagram two

a number of slave receiver units connected to individual said receiver units, said slave units comprising infrared receiving means and means to communicate received said identity data streams from said transmitter units to said receiver units, said slave receiver units having no individual microprocessor means.

circuit boards, one of which is a preamp board 106, and the other a logic board 108 which are mounted to a single gang face plate for installation in a wall or in a ceiling of a room within the premises of a facility where the system of the present invention operates. Preamp board 106 is mounted directly to the face plate and logic board 108 forms the back board mounted behind the preamp board in a piggy-back fashion. Preamp board 106 includes Pin photodiode 118 for detecting by impingement infrared pulses 104 emitted by an intelligent locator transmitter 18."(page 20, lines 4-14)

28. (Conrad Claim 99) The system of claim 21, where each said transmitter unit repeatedly transmits said identity data stream in a unique non-standard periodic pattern consisting of three transmissions with different time intervals between each of said three transmissions in said pattern, and where no two said transmitter units have identical time intervals between said three transmissions.

"To facilitate an understanding of the underlying principle of the present invention, reference is now made to the diagram of Figure 3 wherein there is illustrated timing diagrams in graphical form of three simultaneous infrared transmissions by three separate intelligent locator transmitters over a four second period. It is an important and novel feature of the present invention that a pulse burst of 20 milliseconds duration defines a unique binary identification code that is transmitted approximately once a second with its position in time relative to the start of each second determined by an algorithm."(page 14, lines 5-15)

29. (Conrad Claim 100) The system of claim 21, where each said transmitter unit repeatedly transmits said identity data stream once during successive predetermined time periods, with the time interval between each two successive transmissions differing from the time interval between the previous two successive transmissions.

"To facilitate an understanding of the underlying principle of the present invention, reference is now made to the diagram of Figure 3 wherein there is illustrated timing diagrams in graphical form of three simultaneous infrared transmissions by three separate intelligent locator transmitters over a four second period. It is an important and novel feature of the present invention that a pulse burst of 20 milliseconds duration defines a unique binary identification code that is transmitted approximately once a second with its position in time relative to the start of each second determined by an algorithm."(page 14, lines 5-15)

30. (Conrad Claim 101) The system of claim 21, where at least one said individual remote receiver unit is in communication with one or more slave receiver units, said slave receiver units having no individual microprocessor means and comprising infrared receiving means to receive said identity data streams from said transmitter units and means to communicate received said identity data streams to said at least one said individual remote receiver unit.

"Turning first to Figure 7, there is illustrated by the block diagram two circuit boards, one of which is a preamp board 106, and the other a logic board 108 which are mounted to a single gang face plate for installation in a wall or in a ceiling of a room within the premises of a facility where the system of the present invention operates. Preamp board 106 is mounted directly to the face plate and logic board 108 forms the back board mounted behind the preamp board in a piggy-back fashion. Preamp board 106 includes Pin photodiode 118 for detecting by impingement infrared pulses 104 emitted by an intelligent locator transmitter 18."(page 20, lines

4-14)